What is claimed is:

1. A diagnostic circuit for a treble loudspeaker of a loudspeaker combination, the diagnostic circuit comprising:
an HF signal-generating device (2) for outputting an HF voltage signal (s2);
at least one terminal (A1, A2) for a loudspeaker combination (4);
a measuring resistor (R2) that, upon connection of the loudspeaker combination (4) to the terminal (A1), forms therewith a voltage divider circuit (R2, 4);
a measurement device (10, 11, 12) for measuring a complex measured voltage (UA1) dropping in the voltage divider circuit (R2, 4) and for ascertaining a condition of the treble loudspeaker (LS2) of the loudspeaker combination (4).

2. The diagnostic circuit as recited in Claim 1,
wherein the measuring resistor (R2) is provided between the HF signal-generating device (2) and the terminal (A1), and the measurement device (11, 12) measures a measured voltage (UA1) dropping substantially at the loudspeaker combination (4).

3. The diagnostic circuit as recited in Claim 2,
wherein a capacitor (C4) is provided between the measuring resistor (R2) and the terminal (A1).

4. The diagnostic circuit as recited in one of the foregoing claims,
wherein the HF signal-generating device (2) has an HF signal source (10) for output of an HF input signal (s1), and a downstream impedance converter (3) that can be switched on by a DC voltage diagnostic signal (d).

5. The diagnostic circuit as recited in Claim 4,

wherein the impedance converter (3) has an emitter follower transistor (V3) that receives the HF input signal (s1) and the diagnostic signal (d).

6. The diagnostic circuit as recited in Claim 5, wherein a current source, which preferably has a second transistor (V4) and can be switched on by the diagnostic signal (d), is provided as the emitter resistor of the emitter follower transistor (3), the collector of the second transistor (V4) being connected to the emitter of the emitter follower (V3), the emitter of the second transistor (V4) being grounded through a resistor (R3), and the base of the second transistor (V4) being activated by the diagnostic signal (d), preferably also by the HF input signal (s1).

7. The diagnostic circuit as recited in one of the foregoing claims, wherein the measurement device (11) ascertains a peak value of the measured voltage.

8. The diagnostic circuit as recited in Claim 7, wherein the measurement device (11) has a resistor (R1) connected to the terminal device (A1), a capacitor (C8) connected to the resistor (R1), and an evaluation device (10).

9. The diagnostic circuit as recited in one of Claims 1 through 7, wherein the measurement device (12) has a rectifier circuit (C7, D1, C1) for rectification of the received measured voltage (UA1) and for output of a rectified measured voltage signal to an evaluation device (10).

10. The diagnostic circuit as recited in Claim 9, wherein the rectifier circuit has a series circuit made up

of a resistor (R1), a capacitor (C7), and a Schottky diode (D1), the series circuit being grounded through a capacitor (C1).

11. The diagnostic circuit as recited in one of the foregoing claims,
wherein the measurement device deduces a short circuit of the treble loudspeaker (LS2) when a low measured voltage (UA1) is ascertained, a correct condition of the treble loudspeaker (LS2) from a moderate measured voltage (UA1), and an interruption at the treble loudspeaker (LS2) from a high measured voltage (UA1).

12. The diagnostic circuit as recited in one of the foregoing claims,
wherein the measuring resistor (R2) is a purely ohmic resistor.

13. A method for testing a treble loudspeaker of a loudspeaker combination, in which
an HF voltage signal (s2) is outputted to a voltage divider circuit made up of a measuring resistor (R2) and the loudspeaker combination (4);
a complex measured voltage (UA1) dropping in the voltage divider circuit (R2, 4) is measured; and
a condition of the treble loudspeaker (LS2) is deduced from the measured voltage (UA1).

14. The method as recited in Claim 13,
wherein the measured voltage (UA1) is measured as the voltage drop at the loudspeaker combination.

15. The method as recited in Claim 13 or 14,
wherein a short circuit at the treble loudspeaker (LS2) is deduced when a low measured voltage (UA1) is ascertained at

the loudspeaker combination (4);
a correct condition of the treble loudspeaker (LS2) is deduced when a moderate measured voltage (UA1) is ascertained at the loudspeaker combination (4); and
an interruption at the treble loudspeaker (LS2) is deduced when a high measured voltage (UA1) is ascertained at the loudspeaker combination (4).

16. The method as recited in one of Claims 13 through 15, wherein the peak value of the complex measured voltage is measured and subsequently evaluated.

17. The method as recited in one of Claims 13 through 15, wherein the complex measured voltage is rectified and subsequently evaluated.